

Appln No. 09/694,079

Amdt date April 13, 2005

Reply to Office action of January 13, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-25. (Canceled)

26. (Previously Presented) The system of claim 28 wherein said timing information comprises one of timestamp information, timecode information, frame numbering information and global time of day.

27. (Previously Presented) The system of claim 28 wherein said receiver synchronizes said annotation data with said video signal in response to said timing information.

28. (Currently Amended) A hyperlinked reception system comprising:

a receiver in communication with a broadcast channel; and
a display device in communication with said receiver,

wherein said receiver decodes a digital broadcast signal to recover a video signal and annotation data, the annotation data including graphics data included in the broadcast signal for overlaying a graphics image on a video frame;

wherein, in response to a viewer request, said display device draws the graphics image on a frame-by-frame basis based on the graphics data for at least a plurality of frames of a video carried by the video signal, the drawing of the graphics

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image being synchronized to an underlying frame based on timing data associated with the graphics data.~~displays said annotation data associated with said video signal on a frame by frame basis, and~~

~~wherein said annotation data comprises a plurality of annotations having equal timing information, and said viewer request comprises an indication as to which annotation of said plurality of annotations is to be displayed.~~

29-32. (Cancelled)

33. (Previously Presented) The system of claim 28, wherein said annotation data comprises information regarding goods and services for sale.

34. (Previously Presented) The system of claim 28, wherein said annotation data comprises non-commercial information.

35. (Currently Amended) The system of claim 28 wherein said annotation data ~~comprises mask data and~~ further includes at least one of textual data and graphics data.

36. (Previously Presented) The system of claim 35 wherein said mask data includes location information of an object in an annotated video frame.

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37. (Previously Presented) The system of claim 36 wherein said location information includes a graphics location reference that represents a fixed relation to a set of pixels associated with said object.

38. (Previously Presented) The system of claim 37 wherein said graphics location reference includes an upper left most pixel in said associated pixel set.

39. (Previously Presented) The system of claim 37 wherein said graphics location reference includes a centroid pixel of said associated pixel set.

40. (Previously Presented) The system of claim 35 wherein said mask data comprises location and shape information of an object in an annotated video frame.

41. (Previously Presented) The system of claim 40 wherein said shape information is represented by a graphical overlay of said object.

42. (Previously Presented) The system of claim 40 wherein said shape information is represented by an outline of said object.

43. (Previously Presented) The system of claim 40 wherein said shape information is represented by a mathematical representation of a set of pixels associated with said object.

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44-48. (Cancelled)

49. (Previously Presented) The system of claim 28, further comprising

means for transmitting information related to said viewer request to a remote location over a backchannel communications channel.

50. (Previously Presented) The system of claim 28, further comprising:

means for accepting from a viewer information regarding a commercial transaction, and completing said transaction.

51. (Previously Presented) The system of claim 50, wherein the information regarding a commercial transaction accepted from a viewer comprises at least one of a viewer's identifier, a viewers address, an identifier of a viewer's financial account, a viewer's password, a viewer's personal identification number, a quantity, a model, a size, a color, a descriptor of a good or service to be vended, and a price.

52. (Previously Presented) The system of claim 28, wherein the plurality of annotations having equal timing information are different from one another.

53. (Currently Amended) A hyperlinked reception system comprising:

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a receiver receiving video and annotation data, the annotation data including ~~image overlay data~~ graphics data for overlaying a graphics image on a video frame, object data for an object appearing on a portion of the video, and timing data;

a data store coupled to the receiver for storing at least a portion of the received annotation data; and

~~means for synchronizing, responsive to a user command, display of the image overlay data and object data with the portion of the video based on the timing data~~ drawing the graphics image on a frame-by-frame basis based on the graphics data for at least a plurality of frames of the video, the drawing of the graphics image being synchronized to an underlying frame based on timing data associated with the graphics data.

54. (Previously Presented) The system of claim 53, wherein the image overlay data visually identifies the object in the portion of the video.

55. (Previously Presented) The system of claim 53, wherein the image overlay data includes location of the object.

56. (Previously Presented) The system of claim 53, wherein the image overlay data includes shape information of the object.

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57. (Previously Presented) The system of claim 53, wherein the annotation data includes second timing data, the system comprising:

means for removing the annotation data from the data store in response to a determination based on the second timing data that the annotation data is no longer used in the video.

58. (Previously Presented) The system of claim 53, wherein the annotation data is received in-band with a current video program.

59. (Previously Presented) The system of claim 58, wherein the annotation data is received over a broadcast transmission with a video stream.

60. (Previously Presented) The system of claim 59, wherein the annotation data is received prior to receipt of the portion of the video stream displaying the object.

61. (Previously Presented) The system of claim 53, wherein the annotation data is received out-of-band separate from a current video program.

62. (Previously Presented) The system of claim 61, wherein the annotation data is received over a data communications network.

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63. (Previously Presented) The system of claim 53, wherein the object data includes user selectable information, and the system further comprises:

means for engaging in an electronic commerce transaction in response to a user selection of the user selectable information.

64. (Currently Amended) A hyperlinked broadcast system comprising:

a video source;

a video encoder in communication with said video source, said video encoder producing a transport stream;

an annotation source providing annotation data including graphics data for overlaying a graphics image on image overlay data for visually identifying an object appearing in a video frame;

a data packet stream generator in communication with said annotation source and said video encoder, said data packet stream generator producing encoded data packets; and

a multiplexer system in communication with said video encoder and said data packet stream generator, said multiplexer generating a digital broadcast signal comprising an augmented transport stream from said transport stream and said encoded data packets,

wherein said video encoder provides timing information for each video frame for at least a plurality of video frames provided by the video source, to said data packet stream generator and said data packet stream generator ~~synchronizes the annotation data from said annotation source with a video signal~~

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~~from said video source in response to said timing information~~
steps through the plurality of video frames and associates the
timing information of each video frame to the graphics data,

wherein, a receiver receiving the plurality of video frames
and the graphics data synchronizes drawing of the graphics image
based on the graphics data, to an underlying frame, based on the
timing information.

65. (Previously Presented) The system of claim 64 wherein said timing information comprises one of timestamp information, timecode information, frame numbering information and global time of day.

66. (Previously Presented) The system of claim 64 wherein said annotation data further comprises at least one of textual data and graphics data.

67. (Previously Presented) The system of claim 64 wherein said image overlay data includes location information of an object in an annotated video frame.

68. (Previously Presented) The system of 67 wherein said location information includes a graphics location reference that represents a fixed relation to a set of pixels associated with said object.

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69. (Previously Presented) The system of claim 68 wherein said graphics location reference includes an upper left most pixel in said associated pixel set.

70. (Previously Presented) The system of claim 68 wherein said graphics location reference includes a centroid pixel of said associated pixel set.

71. (Previously Presented) The system of claim 64 wherein said image overlay data comprises location and shape information of the object in the video frame to be annotated.

72. (Previously Presented) The system of claim 71 wherein said shape information is represented by a graphical overlay of said object.

73. (Previously Presented) The system of claim 71 wherein said shape information is represented by an outline of said object.

74. (Previously Presented) The system of claim 71 wherein said shape information is represented by a mathematical representation of a set pixels associated with said object.